FURTHER DATA ON THE ESTABLISHMENT OF *TETYRA BIPUNCTATA* (HERRICH-SCHAEFFER) (HETEROPTERA: SCUTELLERIDAE) IN QUEBEC

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Abstract. — The establishment of *Tetyra bipunctata* (Herrich-Schaeffer) in Québec is reported. Associated plants and overwintering sites of the species are determined for the province.

The previously reported range of *Tetyra bipunctata* (Herrich-Schaeffer), the shieldbacked pine seedbug, in northeastern North America included the following state records (McPherson, 1980, 1982): Connecticut, District of Columbia, Indiana, Maryland, Michigan, Minnesota, New Jersey, New York, Ontario, Virginia, Wisconsin. The same author (1982) reported the northern range limit of this distribution to occur from Minnesota east through northern Michigan and southern Ontario, Canada.

Larochelle (1983) reported *T. bipunctata* for the first time in Québec, based on the finding of one overwintering adult female on 8 October 1979 under dead leaves on the floor of a forest of pine and birches in Saint-Lazare-Station (Vaudreuil Co.), a small locality in southwest Québec, south of the Montréal Island. Extensive collecting throughout the province during the summers of 1980–1985 has provided new data on associated plants, distribution, and spread of the species and confirmed its establishment in Québec. These new observations are based on 93 specimens of 2nd to 5th instars and adults collected in three localities in the southern part of the province. Figure 1 shows the actual known distribution of the species in that area.

The label information for all 93 specimens is given below and is accompanied by associated plant data. The abbreviations f., m., ins.2, ins.3, ins.4, ins.5, and ad. refer to the female, the male, the 2nd to 5th instars, and the adult, respectively.

-Gatineau Co.; Parc de la Gatineau; Belvédère Champlain; 1.IX.1985, 1 ins.3, 4 ins.5; *Pinus sylvestris* (Scotch pine).

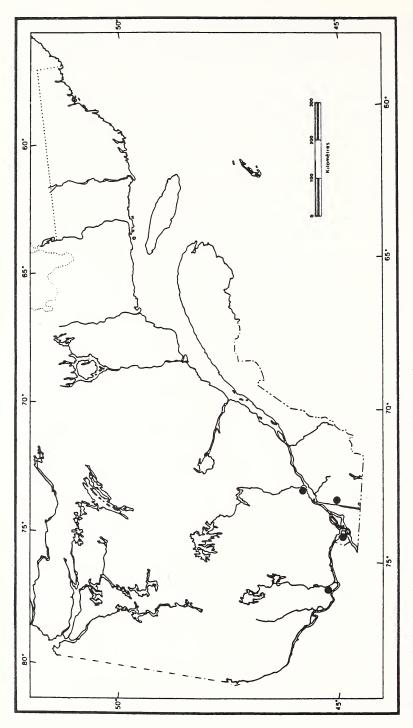
-Rouville Co.; Mont-Saint-Hilaire; 8.VIII.1985; 1 ins.4; *Pinus sylvestris* (Scotch pine).

-Saint-Maurice Co.; Trois-Rivières; 7.VIII.1982, 2 ins.4; 7.IX.1985, 7 ins.2, 5 ins.3, 9 ins.4, 38 ins.5, 19 ad. (9 f., 10 m.); *Pinus banksiana* (Jack pine).

Specimens are located in the Larivière-Larochelle collection.

Trois-Rivières (Saint-Maurice Co.) constitutes the northernmost distribution point of T. *bipunctata* in North America and an extension of more than 80 miles of its previously known distribution in Québec.

T. bipunctata is generally associated with pine. It has long been described as a "southern species," especially in times when the most northern limit of its range was





known from Long Island (Blatchley, 1926) and its association was with southern species of pines. A study conducted in Wisconsin (Gilbert et al., 1967) on the life history of this species, showed its association with northern species of pines as well. Our findings confirm their observations of this scutellerid on *Pinus banksiana*. We also recognize *Pinus sylvestris* as an associated plant in Québec, as the adult and most nymphal stages were found on this tree. The overwintering site and stage (see above) observed in the province agree with those observed in Wisconsin.

The repeated capture of *T. bipunctata* in the same locality and in increasing numbers suggest its successful establishment in the area, although further collection there and in other similar habitats is needed to ascertain that fact. Furthermore, the finding of various life stages of the species indicates its ability to breed in a rigourous climate like that of Québec. We feel that *T. bipunctata* could be found in various locations between the ones already known, as both *Pinus banksiana* and *P. sylvestris* are widespread in the area where they have been commonly planted along highways, in government plantations, and as ornamentals.

ACKNOWLEDGMENTS

We would like to thank Drs. V. R. Vickery and M. Javahery (Lyman Entomological Museum and Research Laboratory, Macdonald College of McGill University) for the review of the manuscript.

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Received October 9, 1987; accepted January 11, 1988.